CO-056 - CONCORDANCE OF DYE-SPRAYING CHROMOENDOSCOPY AND VIRTUAL CHROMOENDOSCOPY FOR COLONIC DYSPLASIA DETECTION IN LONGSTANDING INFLAMMATORY BOWEL DISEASE

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Introduction: Dye-spraying chromoendoscopy (DCE) is the technique of choice for colonic surveillance in patients with long-standing extensive inflammatory bowel disease (IBD). Conversely, the use of virtual chromoendoscopy (VCE) is still controversial. This study aimed to compare lesion and dysplasia detection and accuracy of margins delineation between DCE and VCE.

Methods: Eleven gastroenterologists were given a survey with 20 pairs of pictures of IBD surveillance colonoscopies (10 with nondysplastic lesions, 5 with dysplastic lesions and 5 with no lesions). Each pair contained the same image captured during high-definition colonoscopy using DCE (0.03% indigo carmine) and VCE (Narrow-Band Imaging). The 40 pictures were randomly ordered to avoid any classification bias. For each picture, the gastroenterologist assessed the presence/absence of lesion and, when a lesion was identified, assessed the presence/absence of dysplasia and delineated its margins. To compare lesion and dysplasia detection between techniques, the sensitivity, specificity and inter-observer agreement (using fleiss' kappa (K) test) were calculated. The chi-square test was used to assess the accuracy of margins delineation.

Results: When assessing lesion and dysplasia detection using DCE and VCE, similar sensitivity and specificity values were obtained. Interobserver agreement analysis revealed that DCE and VCE had a moderate agreement in lesion detection but, for dysplasia detection, DCE had a low agreement [K=0.11(0.03-0.18), p<0.01] and VCE a fair agreement [K=0.30(0.22-0.37), p<0.01]. The rate of accurately defined margins was similar for both techniques [DCE-124(80.5%) vs VCE-138(89.6), p=0.17].

Conclusions: This study concluded that both DCE and VCE present similar sensitivity and specificity for lesion and dysplasia detection. Interobserver agreement for dysplasia detection was suboptimal in both techniques. Margin delineation was similar between both techniques. These findings suggest that VCE may constitute a valid alternative for dysplasia screening in IBD.